UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,920	04/30/2001	Robert Brodersen	05306P030	3664

7590	06/15/2006

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EXAMINER
VAUGHN, GREGORY J

ART UNIT	PAPER NUMBER
2178	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/846,920	BRODERSEN ET AL.
	Examiner	Art Unit	
	Gregory J. Vaughn	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2006*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,11-13,17-29,32 and 33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,11-13,17-29,32 and 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Action Background

1.   This action is responsive to the applicant's amendment, filed on 3/23/2006.

2.   Applicant has cancelled claims 9, 10, 14-16, 30 and 31, and added new claims 32 and 33.

3.   Claims 1-8, 11-13, 17-29, 32 and 33 are pending in the case, claims 1, 6, 11, 17 and 22 are independent claims.

Priority

4.   As mentioned in previous office actions, applicant's claim for domestic priority of US provisional application 60/283,713, filed 4/14/2001, under 35 U.S.C. 119(e) is acknowledged.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> *"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention."*

6.   Claims 1, 3, 6-8, 11-13, 17, 19, 22, 24, 27-29, 32 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

7.   **Regarding claim 1**, the amendment filed 3/23/2006 adds the following limitations: *"input data including a hierarchy of instances of object components"*, *"higher-level component instance"* (recited 3 times) and *"lower-level component instance"* (recited 4 times). The examiner has reviewed the originally filed specification, and has failed to find support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

8.   **Regarding claim 3**, the amendment filed 3/23/2006 adds the following limitations: *"higher-level component instance"* (recited 2 times). The examiner

has reviewed the originally filed specification, and has failed to find support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

9.   **Regarding claim 6**, the amendment filed 3/23/2006 adds the following limitations: *"input data including an external hierarchy of instances of object components"*, *"local group of instances"*, *"local group"*, *"local instance"*, *"higher-level external instances"* (recited 3 times), *"external hierarchy"* (recited 2 times), *"updating the local instance"*, *"set of child local instance"* (recited 2 times), *"first set of lower-level external instances within the external hierarchy"*, *"the external instances in the first set having matching child local instances"*, *"inserting new local instances into the local group based on a second set of lower-level external instances"* and *"the external instances in the second set not having matching local instances in the set of child local instances"*. The examiner has reviewed the originally filed specification, and has failed to find support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

10.   **Regarding claim 7**, the amendment filed 3/23/2006 adds the following limitations: *"local instances"* (recited 3 times), *"external instances"* and *"external hierarchy"*. The examiner has reviewed the originally filed specification, and has failed to find support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

11.   **Regarding claim 8**, the amendment filed 3/23/2006 adds the following limitations: *"local group"*, *"local instance"* (recited 2 times) and *"higher-level external instances (recited 2 times)"*. The examiner has reviewed the originally filed specification, and has failed to find support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

12.   **Regarding claims 11-13, 17, 19, 22, 24, 27-29, 32 and 33**, the amendment filed 3/23/2006 adds the limitations similar to those listed above. Specifically the limitations are directed toward the step of *"input data including a hierarchy of instances of object components"* and the use of *"higher-level"*, *"lower-level"*, *"local"* and *"external"* modifiers for the various elements of the invention. The examiner has reviewed the originally filed specification, and has failed to find support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

Claim Rejections - 35 USC § 102

13.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in

this Office action:

> "A person shall be entitled to a patent unless –
>
> (e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language."

14.   Claims 1-4, 6-8, 11-13, 17-20, 22-25 and 27-29 remain rejected and

claims 32 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by

Williams, US Patent 6,591,272, filed 2/22/2000, patented 7/8/2003.

15.   **Regarding independent claim 1**, Williams discloses receiving input data

including a hierarchy of instances of object components and performing a

database modification process in response to the input data. Williams recites:

"Structured Query Language or "SQL" is used to define database elements,

consisting, but not limited to: tables, columns with tables, data types of

columns, relationships between tables, constraints of numerous types, and to

perform queries upon and to also perform create, update, delete operations

upon the aforementioned elements" (column 2, lines 48-53). SQL is an input language that specifies the hierarchy of the object components.

Williams discloses finding a database record matching a higher-level component instance within the hierarchy. Williams recites: *"The process of interrogation of relational database schema or catalogs to obtain information pertaining to the database tables and the interrelationships between database tables is well known"* (column 2, lines 59-62) and *"The use of software to map objects from relations and data in relational database management systems or vice versa to object oriented applications is also well known"* (column 3, lines 3-5).

Williams discloses updating the matching database record based on the higher-level component instance. Williams recites: *"In the prior art, one could typically update the underlying relational database(s) exclusively through the object system"* (column 3, lines 58-59) and *"The present invention also relates to a method of communication of changes to existing objects from client computers and their conversion into updates to one or more rows so as to modify the rows of the appropriate tables in the corresponding databases in transactional mode"* (column 5, lines 34-38).

Williams discloses finding a set of child records of the higher-level component instance and updating the set of child records based on a first set of lower-level component instances within the hierarchy, each instance in the first set of lower-level component instance having a matching record in the set of child records. Williams recites: *"The use of software to map objects from*

relations and data in relational database management systems or vice versa to object oriented applications is also well known" (column 3, lines 3-5) and *"The present invention also relates to a method of communication of changes to existing objects from client computers and their conversion into updates to one or more rows so as to modify the rows of the appropriate tables in the corresponding databases in transactional mode"* (column 5, lines 34-38).

Williams discloses inserting new database records based on a second set of lower-level component instances, the instances in the second set of lower-level component instances not having matching the records in the set of child records. Williams recites: *"For object insertions, an OSFORBStream is built in the client that contains the new attributes of the object to be inserted"* (column 14, lines 2-4) and *"## attributeName## tells OSFGenerate to take the name of the current attribute on this iteration of the repeat block, change the first character of the attribute name to lower case, then insert this attribute name in place of the ##attributeName## target"* (column 25, lines 57-61).

16.   **Regarding dependent claim 2**, Williams discloses deleting records related to the object. Williams recites: *"The present invention also relates to a method of communication removal existing objects from client computers so as to delete the rows of the appropriate tables in the corresponding databases in transactional mode"* (column 5, lines 39-42).

17.   **Regarding dependent claim 3**, Williams discloses the use of users keys related to the object instance. Williams recites: *"Further, validation of a*

sequence number, client IP address, client hostname and timestamp is performed on each received session security token before the username contained therein is used for an access check" (column 19, lines 15-19).

18.   **Regarding dependent claim 4**, Williams discloses the use of SQL. Williams recites: "Pseudo-objects are then produced by dynamic generation and execution of pre-optimized SQL, enveloping values that result from execution of the generated prepared SQL statements" (column 5, lines 2-5).

19.   **Regarding independent claims 6, 11, 17 and 22**, the claims are directed toward a method, apparatus, method, machine-readable medium and a system (respectively) for the method of claim 1, and remain rejected using the same rationale.

20.   **Regarding dependent claims 7, 12, 18 and 23**, the claims are directed toward a method, apparatus, machine-readable medium and a system (respectively) for the method of claim 2, and remain rejected using the same rationale.

21.   **Regarding dependent claims 8, 13, 19 and 24**, the claims are directed toward a method, apparatus, machine-readable medium and a system (respectively) for the method of claim 3, and remain rejected using the same rationale.

22.   **Regarding dependent claims 20 and 25**, the claims are directed toward

a machine-readable medium and a system (respectively) for the method of

claim 4, and remain rejected using the same rationale.

23.   **Regarding dependent claims 27-29, 32 and 33**, Williams discloses

recursively repeating the finding, updating and inserting with respect to

children of the object. Williams recites: *"The records returned would have*

been appended to the "raw" OSFORBStream and the process repeated until

all subtables associated with the child object were read. This generalized

model works for all table interrelationships, no matter how many foreign keys,

primary keys or tables are involved in the creation (or insertion, update and

delete) of the PRO-OBJECT" (column 73, lines 44-51).

Claim Rejections - 35 USC § 103

24.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

25.   Claims 5, 21 and 26 remain rejected under 35 U.S.C. 103(a) as being

unpatentable over Williams in view of Cseri et al. US Patent 6,708,164, filed

3/17/2000, patented 3/16/2004.

26.   **Regarding dependent claim 5**, Williams discloses recursively finding,

updating, inserting and deleting records of a relational database as described

above. Williams fails to disclose cascaded deleting. Cseri teaches the use of

cascaded deleting. Cseri recites: *"if a relational schema provides information*

about cascading delete constraints, then the cascading delete constraints is

taken to indicate nesting. In a relational system, a cascading delete

constraint permits specifying that children of a parent are automatically

deleted, if the parent is deleted" (column 7, lines 13-18).

Therefore, it would have been obvious, to one of ordinary skill in the art at

the time the invention was made to use cascaded deleting as taught by Cseri

with the data translation invention of Williams in order *"for information*

exchange among networked applications and the continuing and increasing

use of relational database systems for managing businesses" (Cseri, column

1, lines 14-16).

27.   **Regarding dependent claims 21 and 26**, the claims are directed toward

a machine-readable medium and a system (respectively) for the method of

claim 5, and remain rejected using the same rationale.

Response to Arguments

28.   Applicant's arguments filed 1/7/2005 have been fully considered but they
are not persuasive.

29.   **Regarding the independent claims 1, 17 and 22,** the applicant recites:
"*Williams does not teach or suggest receiving input data including a hierarchy
of instances of object components, and performing a database modification
process in response to this input data, where the database modification
process...*" (last paragraph of page 14, to the middle of page 15, of the
response file 3/23/2006). Applicant is directed to the rejection of claim 1 as
stated above. Applicant further states that "*Cseri does not help Williams ...
Cseri does not teach or suggest receiving input data including a hierarchy of
instances of object components, and performing a database modification
process in response to this input data, where the database modification
process...*" (middle of page 15, of the response file 3/23/2006). However
Cseri is not used in the rejection of the independent claims. Applicant is
directed to the rejection of claim 1, as stated above. Applicant is further
directed to the *Claim Rejections - 35 USC § 112* section of this office action
for rejections related to new matter.

30.   **Regarding independent claims 6 and 11,** the applicant recites: "Williams
nor Cseri teach or suggest receiving input data including ..." (last paragraph
of page 15, to the middle of page 16, of the response file 3/23/2006).

Applicant is directed to the rejection of claim 1 as stated above. Applicant is further directed to the *Claim Rejections - 35 USC § 112* section of this office action for rejections related to new matter.

Conclusion

31.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

32.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Vaughn whose telephone number is (571) 272-4131. The examiner can normally be reached Monday to Friday from 8:00 am to 5:00 pm.
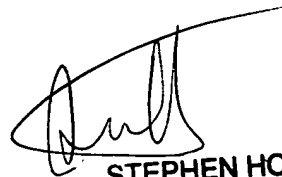
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached at (571) 272-4124.

The fax phone number for the organization where this application or proceeding is assigned is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory J. Vaughn
June 6, 2006

STEPHEN HONG
SUPERVISORY PATENT EXAM